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Michigan Department of Natural Resources &

2009 BEAR HARVEST REPORT FOR THE RED OAK BEAR MANAGEMENT UNIT

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ABSTRACT

A study area consisting of portions of Alcona, Alpena, Montmorency, and Oscoda counties (study area) represented 5% of the area of the Red Oak Bear Management Unit (BMU), yet about 22% of the black bears registered from the Red Oak BMU since 2000 were taken in the study area. Hunters with a bear hunting license valid in the Red Oak BMU were contacted after the 2009 hunting season to determine hunter participation, hunting methods, bear harvest, and hunter satisfaction among hunters in the Red Oak BMU. This information could be used to assess whether the study area should be managed independently from the remainder of the Red Oak BMU. In 2009, an estimated 1.428 hunters spent 6.981 days afield and harvested about 406 bears in the Red Oak BMU. About 28% of hunters harvested a bear. Hunter success and the effort required to harvest a bear was significantly different inside and outside the study area. Success was higher in the study area (38% versus 26%) and effort per harvested bear was lower in the study area (11.2 days versus 19.4 days) than outside the study area. Bear hunters in the study area more often hunted on private land only (79% versus 41%), and they more often harvested a bear on private land than hunters outside the study area (92% versus 43%). A slightly higher proportion of the bear hunters in the study area relied on bait to attract bears than hunters outside the study area (94% versus 87%). Fewer hunters inside the study area rated their hunting experience as poor or very poor than among hunters outside the study area (13% versus 36%). Hunters in the study area experienced less interference from hunters (all types of hunting) than among hunters outside the study area (25% versus 35%).



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Furthermore, fewer hunters in the study area experienced interference with another bear hunter than among hunters outside the study area (16% versus 28%).

INTRODUCTION

Beginning in 1990, the Michigan Department of Natural Resources and Environment (DNRE) created black bear (*Ursus americanus*) management units (Figure 1), including the Red Oak Bear Management Unit (BMU), and limited the number of bear hunting licenses issued for each unit. The DNRE annually sets license quotas for each management unit and allocates licenses among eligible applicants.

During 2000-2009, nearly 22% of the black bears registered from the Red Oak BMU were taken in the study area consisting of portions of Alcona, Alpena, Montmorency, and Oscoda counties (Figure 2). In 2009, this study area represented 5% of the area of the Red Oak BMU. Thus, the study area has been contributing disproportionately to the harvest within the Red Oak BMU. Furthermore, the proportion of bears taken from the study area has been generally increasing since 1990 (Figure 3).

In 2009, bear could be hunted in the Red Oak BMU during September 18-26 and October 2-8. Bear could be harvested with a firearm, crossbow, or archery equipment, except for the special archery-only hunt during October 2-8. Hunters 12-years-old or older could use a crossbow to hunt bear. Hunters using a crossbow were required to obtain a free crossbow stamp, except hunters with a disability already hunting under a DNRE-issued crossbow permit did not need the stamp.

Hunting licenses were valid on all land ownership types and allowed a hunter to take one bear of either sex, excluding cubs and female bears with cubs. Hunters could use bait throughout all hunting periods, but dogs could be used only during September 18-26 (i.e., prior to the archery-only season). Furthermore, the first day of hunting in the Red Oak BMU was restricted to hunting with bait only (i.e., September 18), and the last two days were restricted to hunters using dogs (i.e., September 25-26). All successful bear hunters were required to present their harvested bear at a registration station.

The DNRE and Natural Resources Commission have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Harvest and opinion surveys are some of the management tools used by the DNRE to accomplish its statutory responsibility. Our objectives were to estimate hunter participation and success in the Red Oak BMU and inside and outside the study area within the BMU. This information could be used to assess whether the study area should be managed separately from the remainder of the Red Oak BMU.

METHODS

Following the 2009 bear hunting season, a questionnaire (Appendix A) was mailed to 1,369 people that had purchased a bear hunting license valid for the Red Oak BMU (resident, senior, nonresident bear licenses, and comprehensive lifetime license). The people selected for the sample were bear hunting license buyers that had not previously reported their hunting

activity online for the annual statewide bear harvest survey (Frawley 2010). Hunters reported whether they hunted, number of days spent afield, whether they harvested a bear, date of harvest, and their hunting methods. Hunters also reported whether other hunters (including bear hunters) caused interference during their hunt. Successful hunters were asked to report harvest date, sex of the bear taken, and harvest method. All hunters were asked to rate their hunting experiences.

Estimates were calculated using a simple random sampling design (Cochran 1977). The mean number of days required to harvest a bear was calculated using the number of bears registered by hunters at mandatory check stations as an auxiliary variate (ratio estimator).

A 95% confidence limit (CL) was calculated for each estimate. In theory, the CL can be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval is a measure of the precision associated with the estimate and implies that the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably more serious than theoretical calculations of sampling error. They include failure of participants to provide answers (nonresponse bias), question wording, and question order. It is very difficult to measure these biases; thus, estimates were not adjusted for these possible biases.

Statistical tests are used routinely to determine the likelihood that the differences among estimates are larger than expected by chance alone. The overlap of 95% confidence intervals was used to determine whether estimates differed. Non-overlapping 95% confidence intervals was equivalent to stating that the difference between the means was larger than would be expected 995 out of 1,000 times, if the study had been repeated (Payton et al. 2003).

Questionnaires were mailed initially during early December 2009, and up to two follow-up questionnaires were mailed to nonrespondents. Although 1,369 people were sent the questionnaire, 18 surveys were undeliverable, resulting in an adjusted sample size of 1,351. Questionnaires were returned by 1,066 people, yielding a 79% adjusted response rate.

RESULTS

In 2009, 1,515 bear hunting licenses were purchased for the Red Oak BMU. Nearly $94 \pm 1\%$ of the license buyers hunted bear (Table 1). These hunters spent 6,981 days afield ($\bar{x} = 4.9$ days/hunter) and harvested 406 bears. The average number of days required to harvest a bear in the Red Oak BMU was 17.2 days in 2009.

About 20 ± 1% of the bear hunters in the Red Oak BMU hunted within the study area (289 hunters, Table 1). These hunters spent 1,242 days afield ($\bar{x} = 4.3$ days/hunter) and harvested 111 bears. The average number of days required to harvest a bear in the study area was 11.2 days. An estimated 81 ± 1% of the bear hunters in the Red Oak BMU hunted outside the study area (1,158 hunters). These hunters spent 5,739 days afield ($\bar{x} = 5.0$ days/hunter) and harvested 296 bears. The average number of days required to harvest a bear outside the study area was 19.4 days, which was significantly greater than the effort required in the study area.

About 48% of the bear hunters in the Red Oak BMU hunted on private lands only, 35% hunted on public lands only, and 10% hunted on both private and public lands (Table 2). Among bear hunters hunting within the study area, 79% hunted on private lands only, 15% hunted on public lands only, and 4% hunted on both private and public lands. In contrast, 42% of hunters pursuing bears outside the study area hunted on private lands only, 41% hunted on public lands only, and 11% hunted on both private and public lands. The proportion of hunters using private lands was significantly greater among the hunters in the study area than for hunters outside the study area.

Bear hunters in the Red Oak BMU spent 3,479 days afield on private land, 2,766 days hunting on public land only, and 688 days hunting on both private and public lands (Table 3). Bear hunters active in the study area spent 949 days afield on private land, 257 days hunting on public land only, and 36 days hunting on both private and public lands. In contrast, hunters pursuing bears outside the study area hunted 2,530 days on private lands, 2,508 days on public lands, and 652 days hunting on both private and public lands.

Of the estimated 406 bear harvested in the Red Oak BMU in 2009, 56% of these bears (229) were taken on private land (Table 4). About 44% of the bears (178) were taken on public land. About 92% of the bears taken within the study area and 43% of the bears taken outside the study area were taken on private lands, which was significantly different.

Nearly 28% of hunters harvested a bear in the Red Oak BMU (Table 1); however, hunter success was significantly greater inside compared to outside the study area (38% versus 26%). About 48% of the bears taken in the Red Oak BMU were harvested during the first two days of the hunting season (Figures 4 and 5). Only about 9% of the harvested bear were taken in the last portion of the season (October 2-8). About 52% of the bears taken in the Red Oak BMU were males (212) and 48% were females (195; Table 5). Reported sex of harvested bears did not vary significantly inside and outside the study area.

Most hunters in the Red Oak BMU (86%) used only firearms while hunting bear (Table 6). A slightly higher proportion of the bear hunters in the study area used firearms to hunt bears than hunters outside the study area (89% versus 85%). Most hunters in the Red Oak BMU (85%) used a firearm to harvest their bear (Table 7). Most hunters in the Red Oak BMU (89%) relied primarily on baiting as a means of locating and attracting bears (Table 8). A slightly higher proportion of the bear hunters in the study area relied on bait to attract bears than hunters outside the study area (94% versus 87%).

About 81% of the harvested bears in the Red Oak BMU were taken with the aid of bait only (Table 9). A higher proportion of bear harvested in the study area were taken with the assistance of bait only than the bear harvested outside the study area (94% versus 77%). Hunting success for hunters using bait only in the Red Oak BMU was 26%, while hunting success for hunters using dogs was 49% (Table 10). Success among hunters using bait only was higher for hunters in the study area than for hunters outside the area (39% versus 23%).

About 26% of hunters in the Red Oak BMU rated the number of bear seen as very good or good and 45% rated the number of bear seen as poor or very poor (Table 11). Furthermore, 22% of hunters in the Red Oak BMU rated their opportunities for taking a bear as very good or

good and 46% rated their opportunities as poor or very poor (Table 11). A greater proportion of hunters inside the study area rated the number of bear seen and their opportunities for taking a bear as very good or good than among hunters outside the study area.

About 44% of hunters in the Red Oak BMU rated their hunting experiences as very good or good and 35% rated their hunting experiences as poor or very poor (Table 11). A greater proportion of hunters inside the study area rated their hunting experience as very good or good than among hunters outside the study area (52% versus 42%). Similarly, fewer hunters inside the study area rated their hunting experience as poor or very poor than among hunters outside the study area (13% versus 36%).

Hunter satisfaction is affected by many factors such as hunting success and whether hunting activities were completed without interference. Nearly 33% of the hunters in the Red Oak BMU were interfered with by other hunters (Table 12). Most of this interference was caused by another bear hunter; 26% of the hunters reported that other bear hunters interfered with their hunt. Hunters in the study area experienced less interference from hunters (all types of hunting) than hunters outside the study area (25% versus 35%). Furthermore, fewer hunters in the study area experienced interference with another bear hunter than hunters outside the study area (16% versus 28%).

DISCUSSION

The differences between many estimates for the study area and the remainder of the Red Oak BMU likely reflect differences in land ownership patterns. About 95% of the study area was privately owned, while 65% of the area outside the study area was private lands. Thus, a greater proportion of hunters used private lands and took bears on private lands in the study area because these hunters were more dependent on private lands for hunting opportunities. In addition, interference among hunters was less frequent in the study area because private landowners likely limited hunter numbers on their properties.

ACKNOWLEDGEMENTS

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LITERATURE CITED

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Payton, M. E., M. H. Greenstone, and N. Schenker. 2003. Overlapping confidence intervals or standard error intervals: what do they mean in terms of statistical significance? Journal of Insect Science 3:34.



Figure 1. Bear management units open to hunting in Michigan, 2009.

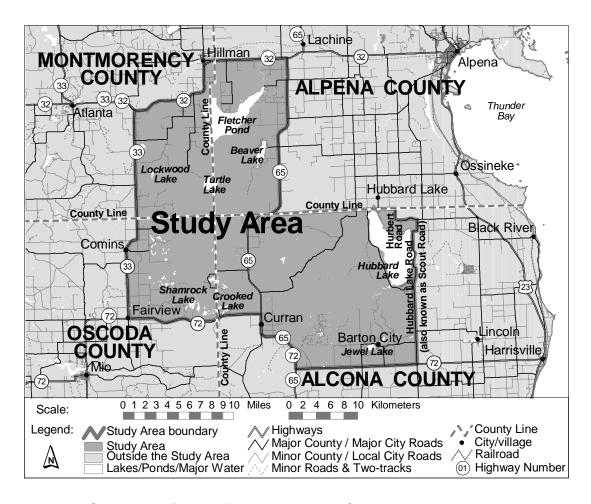


Figure 2. Study area (shaded) within the Red Oak BMU in Michigan.

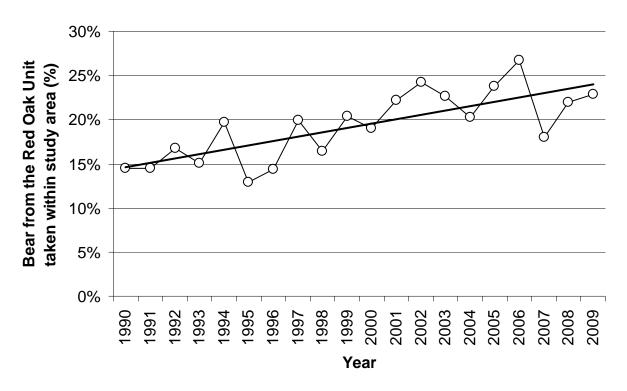


Figure 3. Proportion of bear taken in the Red Oak Bear Management Unit originating from the study area.

■ Study area □ Outside study area

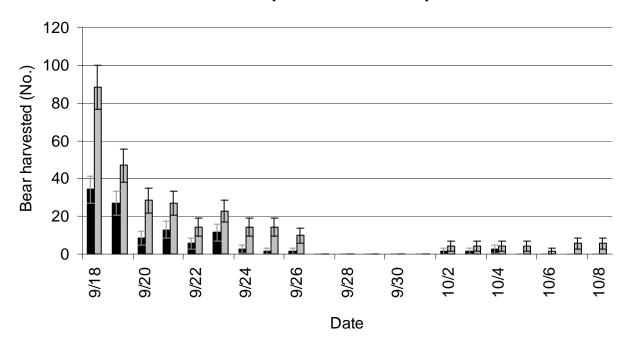


Figure 4. Estimated number of bear harvested in the Red Oak BMU by date during the 2009 bear hunting season (September 18-26 and October 2-8). Estimates presented separately for harvest within and outside the study area.

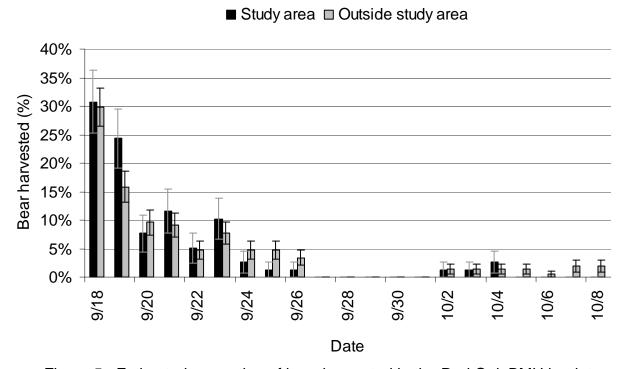


Figure 5. Estimated proportion of bear harvested in the Red Oak BMU by date during the 2009 bear hunting season (September 18-26 and October 2-8). Estimates presented separately for harvest within and outside the study area.

Table 1. Estimated number of hunters, harvest, hunter success, hunting effort, mean days hunted, and mean effort per harvested bear during the 2009 Michigan bear hunting season in the Red Oak BMU.

	Hunt	ers	Har	vest		nter	Huntin	g effort	•	hunted nter (\overline{x})	per ha	hunted arvested ar (\overline{x})
Area	No.	95% CL ^a	No.	95% CL ^a	%	95% CL ^a	Days	95% CL ^a	Days	95% CL ^a	Days	95% CL ^a
Inside study area	289	19	111	13	38	4	1,242	109	4.3	0.2	11.2	1.7
Outside study area	1,158	21	296	20	26	2	5,739	193	5.0	0.1	19.4	1.4
Red Oak BMU ^b	1,428	12	406	22	28	2	6,981	187	4.9	0.1	17.2	1.1

^a95% confidence limits.

bArea inside and outside study area combined. Number of hunters does not add up to total in Red Oak BMU because hunters could hunt both inside and outside study area.

Table 2. Estimated number and proportion of hunters hunting on private and public lands during the 2009 bear hunting season.

Land type Both private and Public land only Private land only public lands Unknown land Management 95% 95% 95% 95% 95% 95% 95% 95% % % unit CL CL CL CL % CL CL % Total Total Total CL Total CL Inside study 3 15 3 11 area 229 18 79 44 8 4 4 4 3 1 1 Outside 23 40 2 131 7 study area 479 23 41 2 465 14 11 1 84 11 1 Red Oak **BMU**^a 692 25 48 2 503 23 35 2 145 15 88 12 10 6

^aArea inside and outside study area combined. Number of hunters does not add up to total in Red Oak BMU because hunters could hunt both inside and outside study area.

Table 3. Estimated number of days of hunting effort on private and public lands during the 2009 Michigan bear hunting season.

				Land	d type			
-	Private	lands	Public	lands	•	vate and lands	Unkı	nown
Management unit	Total	95 CL	Total	95 CL	Total	95 CL	Total	95 CL
Inside study area	949	93	257	59	36	18	0	0
Outside study area	2,530	150	2,508	157	652	93	48	23
Red Oak BMU ^a	3,479	164	2,766	163	688	94	48	23

^aArea inside and outside study area combined. Column totals may not equal management unit totals because of rounding errors.

Table 4. Estimated bear harvest in Red Oak BMU on private and public lands during the 2009 bear hunting season, summarized by area.

						Are	ea					
		Study	area			Outside s	tudy area			Red O	ak BMU	
Ownership	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL
Private	92	3	102	12	43	4	126	14	56	3	229	18
		_		_		_				_		
Public	8	3	9	4	57	4	169	16	44	3	178	16

Table 5. Sex of bears harvested in the Red Oak BMU during the 2009 bear hunting season, summarized by area.

						Are	ea					
		Study	area			Outside s	tudy area	l		Red O	ak BMU	
Ownership	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL
Male	47	6	53	0	54	1	159	15	52	2	212	17
iviale	47	6	55	9	54	4	159	13	32	3	212	17
Female	53	6	58	10	46	4	136	14	48	3	195	17

Table 6. Equipment used to hunt bear in the Red Oak BMU during the 2009 bear hunting season, summarized by area.

						Are	ea					
•		Study	area			Outside s	tudy area			Red O	ak BMU	
Equipment	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL
Firearm	89	2	257	19	85	1	986	24	86	1	1,228	19
Bow ^a	20	3	58	10	30	2	343	21	28	2	395	22
Crossbow	7	2	20	6	6	1	67	10	6	1	87	12
Unknown	0	0	0	0	0	0	3	2	0	0	3	2

^aIncluded recurve, compound, and long bows.

Table 7. Equipment used to harvest bear in the Red Oak BMU during the 2009 bear hunting season, summarized by area.

Equipment						Are	ea					
used to		Study	area			Outside s	tudy area			Red O	ak BMU	
harvest bear	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL
Firearm	90	4	99	12	84	3	247	18	85	2	347	21
Bow ^a	8	3	9	4	12	2	36	7	11	2	44	8
Crossbow	3	2	3	2	4	1	11	4	3	1	14	5
Unknown	0	0	0	0	0	1	1	2	0	0	1	2

^aIncluded recurve, compound, and long bows.

Table 8. Hunting methods used to locate and attract bears in the Red Oak BMU during the 2009 bear hunting season, summarized by area.

						Are	ea					
Primary hunt		Study	area			Outside s	tudy area			Red O	ak BMU	
method	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL
Bait only	94	2	271	19	87	1	1,013	23	89	1	1,266	18
Dogs only	1	1	4	3	5	1	54	9	4	1	58	10
Dogs & bait	2	1	7	3	6	1	64	10	5	1	71	10
Other	1	1	4	3	2	0	20	6	2	0	24	6
Unknown	0	1	1	2	1	0	7	3	1	0	9	4

Table 9. Hunting methods used to harvest bears in the Red Oak BMU during the 2009 bear hunting season, summarized by area.

Hunt method						Are	a					
when bear		Study	area			Outside st	tudy area			Red O	ak BMU	
harvested	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL
Bait only	94	3	104	13	77	3	227	18	81	2	331	20
Dogs only	3	2	3	2	11	2	33	7	9	2	36	7
Dogs & bait	4	2	4	3	10	2	30	7	8	2	34	7
Other	0	0	0	0	2	1	6	3	1	1	6	3
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Table 10. Bear hunter success in the Red Oak BMU, summarized by primary hunting method used and area hunted.

			Are	ea		
Hunt	Study a	area	Outside s	tudy area	Red (Oak BMU
method	%	95 CL ^d	%	95 CL ^d	%	95 CL ^d
Bait only	39	4	23	2	26	2
Dogs only	67	29	53	9	54	8
Dogs & bait	40	23	47	8	46	8
Other	0	0	29	13	24	11
Dogs ^a	50	19	49	6	49	6

^aCombined hunters using dogs only and hunters using dogs and bait.

Table 11. Proportion and number of bear hunters satisfied with the number of bear seen, opportunities to take a bear, and their overall bear hunting experience in the Red Oak BMU during the 2009 bear hunting season, summarized by area.

						Are	ea					
		Study	area		(Outside st	tudy are	a		Red Oa	ık BMU ^a	1
Hunters rating	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL
Poor soon work good												
Bear seen - very good or good hunt rating	35	4	101	12	24	2	279	19	26	1	375	21
Bear seen - poor or												
very poor hunt rating	33	4	94	12	48	2	554	24	45	2	638	24
Opportunities to take bear - very good or												
good hunt rating	32	4	92	12	19	1	223	18	22	1	311	20
Opportunities to take bear - poor or very poor hunt rating	37	4	107	13	48	2	556	24	46	2	654	25
Overall hunt - very good or good hunt rating	52	4	151	15	42	2	482	23	44	2	624	24
raurig	02	7	101	10	74		702	20	77		027	47
Overall hunt - poor or very poor hunt rating	13	3	81	11	36	2	421	22	35	2	496	23

^aEstimates for the entire Red Oak BMU may not equal sum of estimates for inside and outside study area because some hunters hunted both inside and outside study area.

Table 12. Proportion and number of bear hunters interfered by other hunters in the Red Oak BMU during the 2009 bear hunting season, summarized by area.

						Are	ea					
Hunters		Study	area			Outside s	tudy area	l		Red Oa	ak BMU ^a	
response	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL	%	95 CL	Total	95 CL
Interfered by another hunter	25	3	72	11	35	2	405	22	33	2	468	23
Interfered by another bear hunter	16	3	47	9	28	2	330	20	26	1	370	21

^aEstimates for the entire Red Oak BMU may not equal sum of estimates for inside and outside study area because some hunters hunted both inside and outside study area.

Appendix A

2009 Michigan Bear Harvest Questionnaire for the Red Oak BMU



MICHIGAN DEPARTMENT OF NATURAL RESOURCES – WILDLIFE PO BOX 30030 LANSING MI 48909-7530

MICHIGAN BEAR HARVEST REPORT (RED OAK UNIT)

This information is requested under authority of Part 435, 1994 PA 451, M.C.L. 324.43539.



It is important that you answer these questions even if you did not hunt or harvest a bear. You were selected to receive this survey because you purchased a 2009 bear hunting license valid for the Red Oak Management Unit in the northern Lower Peninsula.

1.	Did you hunt bear i	in the Red Oak Mana	gement Unit during the 2009 season?
	¹ Yes	² No; (If you select	"No", you are finished. Please return the survey.)
2.	Did you hunt bear of please check all that app		sbow, or bow during the 2009 bear season?
	¹ Firearm	² Crossbow	³ Bow (recurve, compound, or long bow)
3.	What hunting meth season? (please select		often when hunting bear during the 2009 bear
	¹ Hunted over bait	tonly	² Used dogs only (bait not used)
	³ Used dogs starte	ed over bait	⁴ Used other methods not involving dogs or bait
4.			as the total number of gallons you used during Please write in the gallons used.)
		Gallons	
5.	Did you kill a bear	and put your kill tag	on it? (If no, please skip to question 7.)
	¹	² No	

6. If your harvest tag was put on a bear, please fill in the information below

a. What date was the bear harvested?

(please check [X] the box for the date of harvest)

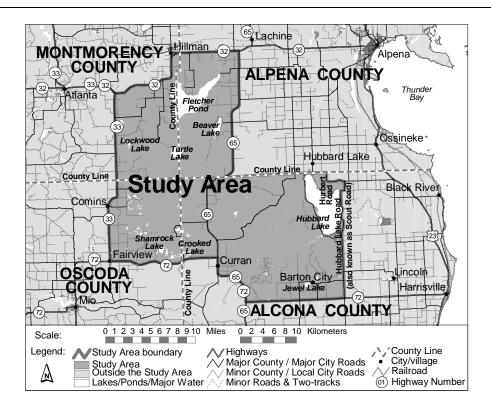
	September 2009						
S	M	Т	W	Т	F	S	
					18	19	
20	21	22	23	24	25	26	

	October 2009						
S	М	Т	W	Т	F	S	
					2	3	
4	5	6	7	8			

b. What was the sex of the bear? ² ☐ Female Not sure **c.** In what county was it harvested? (Please write in the county name.) d. On what type of land was the bear harvested? ¹ ☐ Private ² Public e. What weapon was used to harvest bear? ³ Bow (recurve, compound, or long bow) ¹ Firearm ² Crossbow f. What was the method of harvest? ² Used dogs only (bait not used) ¹ Taken over bait ³ Used dogs started over bait ⁴ Used other methods not involving dogs or bait 7. Did other hunters interfere with your bear hunting? ² \square No (Skip to guestion 9.) ¹ ☐ Yes 8. If you answered "yes" to the previous question, was the interference caused by other bear hunters? ² ☐ No ¹ ☐ Yes 9. How would you rate the following for your 2009 bear hunting season: (Select one choice per item.) a. Number of bear you saw. b. Number of opportunities you had to take a bear.

c. Your overall bear hunting experience.

For the next three questions, we want to find out how often you may have hunted bear inside the study area that we have drawn on the figure. This study area includes parts of Alcona, Alpena, Montmorency, and Oscoda counties.



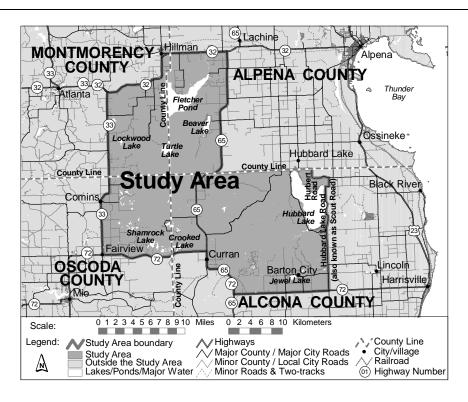
10. Did you hunt bear inside the study area outlined on the map during the 2009 season?

No; skip to question 13.

Yes

COUNTY HUNTED (List each county that you hunted for bear	NUMBER OF DAYS			
inside the study area)	HUNTED	T`	YPE OF LAN	ND
		¹ Private	² Public	³ ☐ Bot
		¹ Private	² Public	³ Bot
		¹ Private	² Public	³ Bot
		¹ Private	² Public	³ Bot
		¹ Private	² Public	³ ☐ Bot

For the final two questions, we want to find out how often you may have hunted bear <u>outside</u> the study area that we have drawn on the figure. This study area includes parts of Alcona, Alpena, Montmorency, and Oscoda counties.



13.	Did you hunt	bear <u>outside</u> the study area shown on the figure during the 2009 season?
	¹□ Yes	² No; skip the final question if you did not hunt outside study area.

14. If you hunted <u>outside</u> of the study area outlined on the figure, please report the number of days for each county that you hunted bear in the following table.

COUNTY HUNTED (List each county that you hunted for bear outside the study area)	NUMBER OF DAYS HUNTED	T'	YPE OF LAN	ID
		¹ Private	² Public	³ Both
		¹ Private	² Public	³ Both
		¹ Private	² Public	³ Both
		¹ Private	² Public	³ Both
		¹ Private	² Public	³ Both

Please return questionnaire in the enclosed postage-paid envelope.

Thank you for your help!

GREAT LAKES, GREAT TIMES, GREAT OUTDOORS www.michigan.gov/dnr